

# **SPEND WORKBENCH**



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# MANAGING SPEND CLASSIFICATION RULES AND VISUALIZING THE SPEND DATA

## **Spend Management Overview**

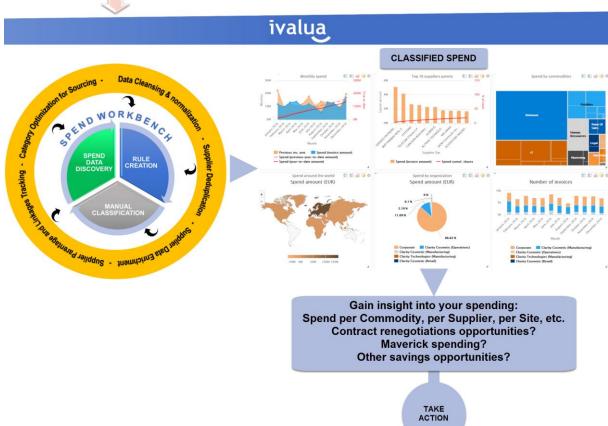
To craft informed sourcing and spend strategies (opportunity assessment, category planning, supplier selection, etc.), procurement organizations need to be able to access, organize and analyze spend data.

In practice, to achieve this, companies have to overcome major hurdles that arise from the disparity in source systems, charts of accounts, commodity codes, and so on.

The *Spend Workbench* module allows you to <u>collect</u> spend data scattered across different systems, <u>classify</u> it into a homogeneous commodity taxonomy and <u>build spend data analysis</u> using different axes, such as the spend categories, geographical zone, organization, supplier and others.

## **High-Level Process**





Upstream, EAIs are used to load spend data from multiple data sources (ERP, Other IS, Excel files...). This heterogeneous spend data is transformed to obtain IVALUA spend data (invoice lines) and injected into the Spend Workbench.

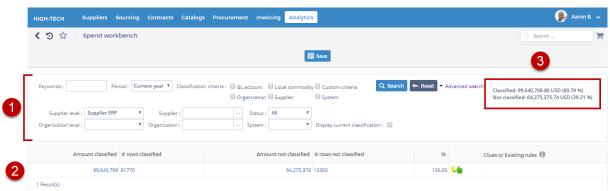
You can then proceed with the analysis and classification of your spend. In IVALUA the classification process rests on a **rule engine** that provides you with efficient, repeatable, and self-learning data classification capabilities. The manual classification is also available and is meant for invoice lines for which rules don't apply.

For an accurate classification, additional actions must be carried out all along the classification process within the *SRM* module (supplier data cleansing or enrichment, supplier deduplication and others) as well as within the commodity taxonomy of your company (commodity taxonomy optimization for better sourcing strategy).

Once your spend data is properly categorized into your custom products and services taxonomy, you'll have a sound foundation for analytics and actionable intelligence. You'll be able to leverage this data using IVALUA's built-in BI Visualization tool to create dashboards and reports that you can 'push' where they will be most useful in the IVALUA Suite.

## Reviewing and Classifying Spend Data in the Spend Workbench

To display the spend data, select the **Analytics > Spend workbench** menu. The *Spend Workbench* page is displayed.



- Search filters
- 2 Search result: displays classified and not classified spend data depending on filters applied.
- 3 Real time information on classified and unclassified spend displayed in the search result.

From this page you can proceed with classifying your spend data.

- Display spend data (→p.10). You can consolidate spend using dedicated filters, display classification currently applied at each consolidation level and drill down to view details at invoice line level.
- Based on observed spend patterns create classification rules (→p.14)
- Manually classify invoice lines for which the rules do not apply (→p.25)

#### Discovering Spend Data in the Spend Workbench Page

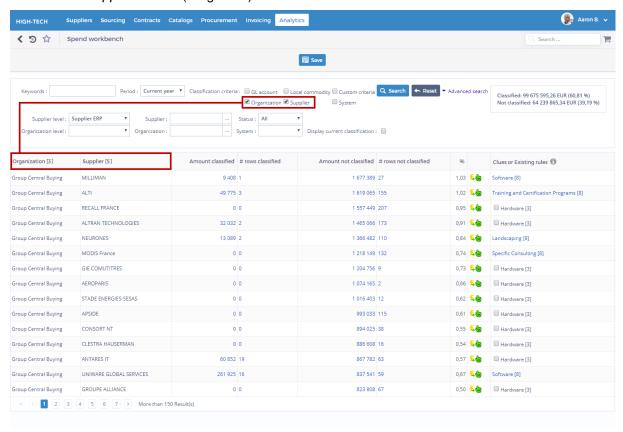
#### **Consolidating Spend Data**

#### Using Classification Criteria

By default, the *Spend Workbench* displays total classified and unclassified data. You can display your spend using one or more criteria available in the **Classification criteria** filter (*GL account, Supplier, Organization*, or other criteria):

- For each criteria selected, a new column is added to the spend workbench list, with, in header, the name and the weight of the criteria (in brackets).
- The invoice lines are consolidated by criteria of your choice.

In the screenshot below spend lines are consolidated by Organization (weight = 3) and Supplier criteria (weight = 5).



To select the period you wish to analyze, use the **Period** filter: *Current year*, *Previous year* or *All years* (to display spend without period distinction or to classify the spend history lines).

To filter on a specific supplier, use the **Suppler** filter: the search result corresponds to the spend of the selected supplier and its child entities, if any.

To filter on a specific organization, use the **Organization** filter: the search result corresponds to the spend of the selected organization and its child entities, if any.

To display spend corresponding to a specific source system, use System filter.

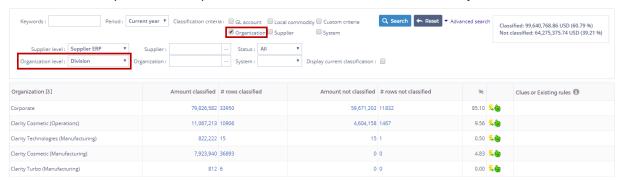
To display spend depending on classification status, use the **Status** filter: *Classified* (the *Amount not classified* and # rows not classified columns are hidden), *Not classified* (the *Amount classified* and # rows classified columns are hidden) or *ALL* data.

When you consolidate spend by *Organization* or *Supplier* criteria, you can, in addition, indicate at which level of your company organization or which level of supplier hierarchy you wish the consolidation to be done. To do so, use the **Organization level** or the **Supplier level** filters.

### Consolidating by Organization Level

In IVALUA the invoice lines are associated with the lowest level of organizational hierarchy, the *Site* level.

When in the *Spend workbench*, you display your spend by the *Organization* criteria, the **Organization level** filter is defaulted to the *Site* value and invoice lines are consolidated at *Site* level. You can go to a higher level of consolidation by selecting *Division*, *Branch* or *Group*: the overall spend data will be consolidated at the level of your choice.



#### Consolidating by Supplier Level

A specific level of supplier hierarchy is reserved for suppliers originating from ERPs: the *Supplier ERP* level.

When invoice lines are imported from another system:

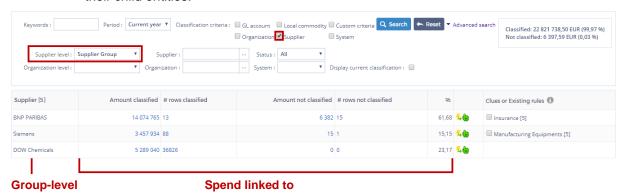
- In IVALUA the records of the corresponding suppliers are created automatically with the Supplier ERP level (unless they were already created during a previous import from the same system).
- The imported spend is attached to these ERP suppliers.

The supplier records with *ERP* level are only meant for handling the imported spend. They don't represent any real entity of supplier operational structure.

To associate the imported spend to an effective supplier from the IVALUA supplier repository, you must declare that supplier as parent of the ERP supplier. Thanks to this parent/child linkage spend consolidation can be done at any level of supplier hierarchy.

In the *Spend workbench*, when displaying spend by the *Supplier* criteria, the *Supplier level* filter is defaulted to the *Supplier ERP* level. Hence, only the imported spend is displayed.

To consolidate at another level of supplier hierarchy, select the desired value in the **Supplier level** filter: the spend in the search result relates to the displayed suppliers and their child entities.



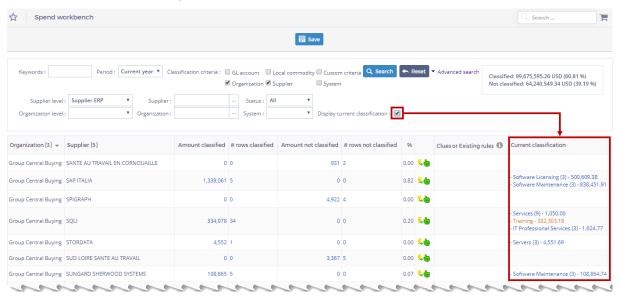
the displayed groups and its child entities

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suppliers

#### **Displaying current classification**

To show the commodities assigned to the displayed spend, select the **Display current classification** option.



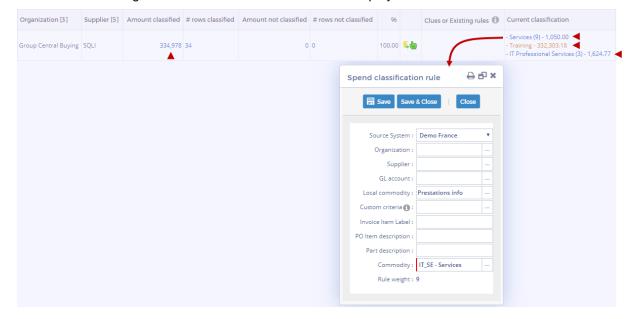
The **Current classification** column is displayed. For each spend line it indicates how the amount of the classified spend is dispatched between commodities.

- In blue (clickable links), commodities assigned using rules, followed by the rule weight (in brackets). Clicking the link displays the rule (for information on rules, see page 14).
- In orange, classifications assigned manually (for information on manual classification, see page 25).

In the screenshot below, the classified amount (334,978€) is broken down into three commodities:

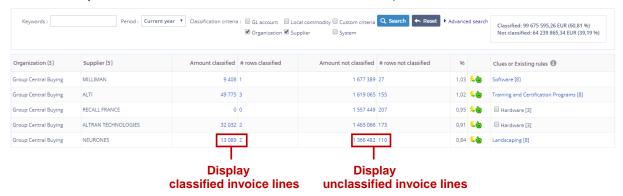
- Training (332,303.18€) → manual classification
- Services (1,050€) → classification rule, rule weight=9
- IT Professional Services (1,624.77€) → classification rule, rule weight=3

Clicking one of the rule-based commodities displays the rule.

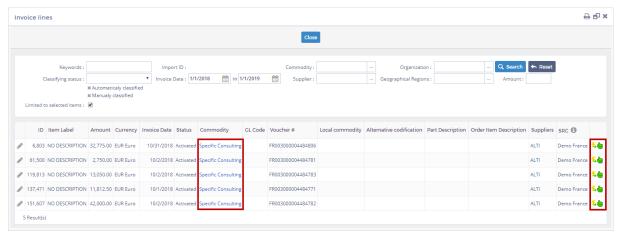


#### **Drilling Down Spend Data to Invoice Line Level**

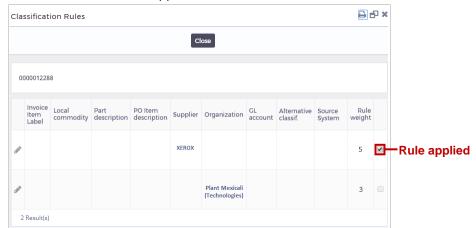
To display the invoice lines corresponding to a spend line, click the associated amount (Amount classified/Amount not classified columns) or the number of invoice lines (# rows classified / # rows not classified columns).



The pop-up window that opens shows the related invoice lines. For each invoice line, you can create a new rule by clicking the **Create rule** icon  $(\Rightarrow p. 24)$  or carry out manual classification by clicking the **Manual classification** icon  $(\Rightarrow p. 25)$ .



For classified invoice lines the *Commodity* column displays the current classification. Clicking a commodity opens a pop-up window that displays the list of the rules matching the invoice line: the rule applied is the one with the checkbox selected.



#### **Classifying Spend Using Rules**

There are two ways for creating rules:

- Creating rules using classification clues, or
- Creating rules from scratch

Before you start creating rules, you should take time to get familiar with rules and clues.

#### **About Rules**

#### What is a Rule?

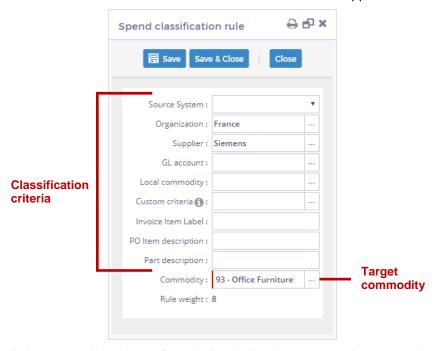
The purpose of rules is to automate the classification process based on recurring patterns observed within your company. Rules classify the invoice history lines retroactively and will be reused to automatically classify future invoice lines.

In practice, **rules** are mappings between a <u>commodity</u> from your commodity taxonomy and one or more <u>classification criteria</u>. When an invoice line meets all criteria specified in a rule, the rule indicates to the system that the invoice line must be classified into the associated commodity.

Let's consider the following example of a rule: **If** *Organization=France* and *Supplier=Siemens*, **Then** *Commodity=*Office Furniture.

In this rule two classification criteria (*Organization=France* and *Supplier=Siemens*) are mapped to the *Office Furniture* commodity. All invoice lines meeting these criteria will be classified into the *Office Furniture* commodity.

The screenshot below demonstrates the rule as it would appear in IVALUA.



Rules are weighted to reflect their relative importance when two rules applicable to the same invoice line point to distinct commodities, thereby causing a rule conflict (for information about rule conflict management, see page 15).

Rule weight is computed as the sum of the weights of all the criteria used in the rule. In the example above, the rule weight (8) is the addition of the weights of the *Organization* and *Supplier* criteria. The weights of criteria are pre-configured by authorized users and are not visible when displaying a rule.

#### Rule Conflict Management

When multiple rules apply to a single invoice line and these rules point to distinct commodities, there is a rule conflict.

Rule conflicts are resolved by rule weightage and, in the second instance, by rule seniority:

- Weightage: the rule with the highest weight prevails
- Seniority: when applicable rules have the same weight, the rule that was created first takes precedence.

Here is an example to illustrate a rule conflict and its resolution. Let's say you wish to classify an invoice line based on the following criteria:

- Invoice Item Label=Security tools Training
- Supplier=IBM
- Local commodity = Certification

Three rules pointing to distinct commodities apply to this invoice line:

	Rule 1	Rule 2	Rule 3
Created on	31/11/2017	01/01/2017	01/01/2018
Classification criteria	Invoice Line Label =%Training%	Supplier =IBM	Local commodity =Certification
Weight	8	5	8
Commodity	Training	IT Professional Services	IT Hardware Maintenance

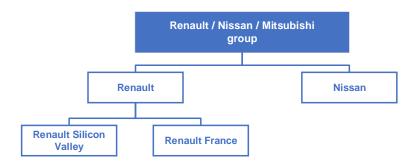
Both *Rule 1* and *Rule 3* prevail over *Rule 2* as they have higher weights. *Rule 1 & 3* have the same weight but, since *Rule 1* has seniority over *Rule 3*, *Rule 1* will be applied, and the invoice line will be classified into the *Training* commodity.

#### Rules Based on the Supplier Classification Criteria

Rules based on the *Supplier* criteria can point to any level of supplier hierarchy: the rule will cover all child entities of the supplier specified in the rule.

If more than one rule covers the same entity, the conflict will be resolved by applying the most accurate classification (the most granular level prevails).

Let's consider an example with the Renault-Nissan-Mitsubishi Alliance.



- Rule 1: Renault / Nissan / Mitsubishi group = Cars commodity.
   This rule covers all child entities of the group.
- Rule 2: Renault Silicon Valley = Research & Development commodity.
   This rule covers only the Renault Silicon Valley entity.

Invoice lines linked to *Nissan* or *Renault France* will inherit the classification of the group and will be classified into the *Cars* commodity (*Rule* 1).

Invoice lines linked to *Renault Silicon Valley* will be classified into *Research & Development*, even though *Renault Silicon Valley* belongs to the *Renault / Nissan / Mitsubishi* group (*Rule 2*).

#### Rules Based on the Organization Classification Criteria

Rules based on the *Organization* criteria can point to any level of your company's organizational tree: the rule will cover all child entities of the organization used in the rule.

If more than one rules cover the same organization, the rule using the more granular organization level applies.

#### **Rule Application**

Rules are not applied immediately: an EAI task dedicated to rule application is scheduled to be executed automatically on a regular basis.

#### **About Classification Clues**

#### What is a Clue?

Clues are potential classification candidates that are suggested to help you classify spend data. They reflect the spend classification experience of your company. Clues are loaded into IVALUA upstream of the classification task you perform in the *Spend workbench*.

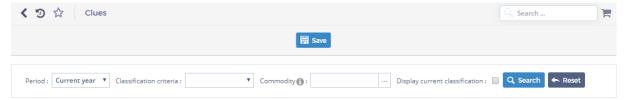
More precisely, clues are mappings between *commodities* and *classification criteria*. Let's say your company purchases hardware from *IBM United States*. The clue reflecting this experience would be the *Hardware* commodity mapped to the *IBM United States* supplier.

Once loaded into IVALUA, these mappings are stored in the **Clues** page. In this page you can view clues from various angles and, if needed, create new ones or remove some of them ( $\rightarrow p.18$ ).

In the **Spend workbench** page, when displaying spend by criteria of your choice, clues become classification suggestions for these criteria (→p.20).

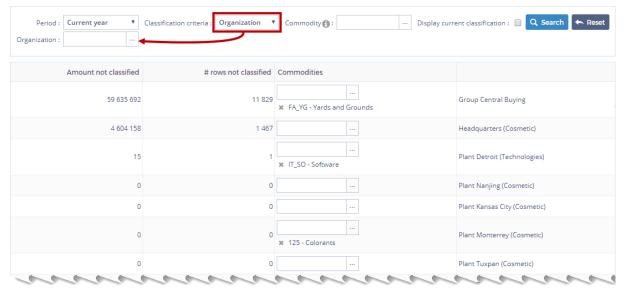
#### Reviewing Clues in the Clues Page

To access the **Clues** page, select the **Analytics** > **Spend workbench** > **Clues** menu. At this stage, clues are hidden.



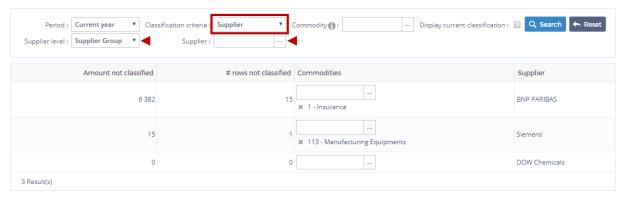
To display them, select the Classification criteria for which you wish to display clues:

- An additional filter related to the selected criteria is available: The Organization filter for the Organization criteria, the Supplier filter for the Supplier criteria, and so on.
- The search result shows the unclassified spend linked to the selected criteria (the Amount not classified and #rows not classified columns). The Commodities column contains the commodities (if any) mapped to criteria and thereby suggested for the unclassified spend.



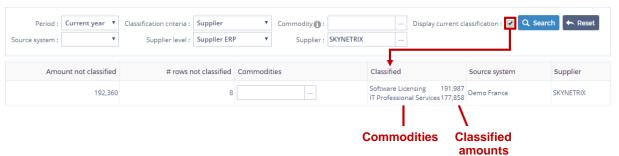
If you filter on the *Supplier Classification criteria*, the *Supplier level* filter is displayed in addition and is defaulted to the *Supplier ERP* level. You can select any other level of supplier hierarchy:

- The suppliers in the search result are filtered on the level of your choice
- The spend data is consolidated at the selected supplier level
- As classification suggestions, the clues cover the displayed suppliers and their child entities.



To display spend or criteria pointing to a specific commodity suggested, use the **Commodity** filter.

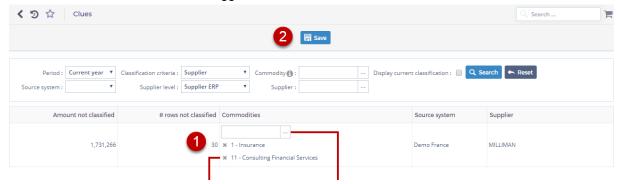
To display how the spend related to the displayed criteria is currently classified, select the **Display current classification** option: The *Classified* column is displayed. For each row, it displays the commodities and the classified spend amounts.



In this page you can also create new clues or remove existing ones:

- 1. Access the line with criteria whose mappings you wish to modify:
  - To add a new clue, select the desired commodity in the associated field.
  - To remove an existing clue, click the *Delete* icon x of the commodity you wish to remove.
- 2. Click the **Save** button available in the action bar.

  The clue is saved. The new mapping will be displayed in the *Spend workbench* page as classification suggestion.

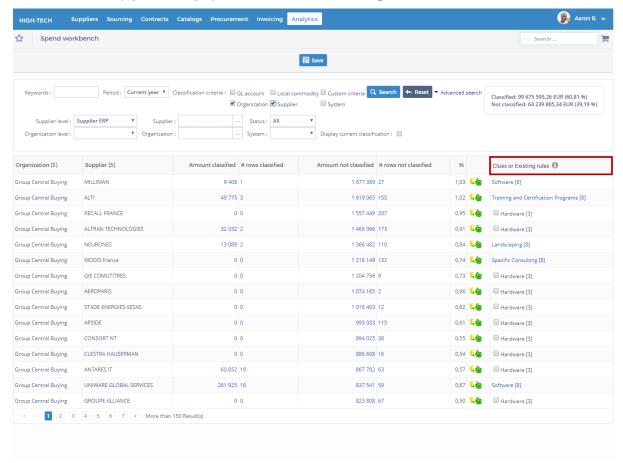


Remove a commodity

Add commodities

#### Displaying Commodity Suggestions in the Spend Workbench Page

In the context of the *Spend Workbench*, clues are materialized as commodity suggestions to help you classify spend. The **Clues or Existing rules** column is available to that end.



For each spend line and based on selected criteria, this column displays one of the following:

#### Clues.

Commodity suggestions mapped, within clues, to one or more criteria of the spend line. The checkbox on the left side of a commodity allows you to create new rules based on this clue.

More than one commodity can be suggested for a spend line, up to a limit of three (configurable).

#### Existing rules (clickable links).

If there is a rule matching exactly the criteria of the spend line, the rule replaces the clues and the rule commodity is displayed. Clicking the commodity shows the rule in a pop-up window.

Note, however, that the rule displayed in this column is not necessarily applied to the spend line: other conflicting rules could take precedence over it due to weight or seniority advantage.



#### MANAGING SPEND CLASSIFICATION RULES AND VISUALIZING THE SPEND DATA

#### Reviewing and Classifying Spend Data in the Spend Workbench

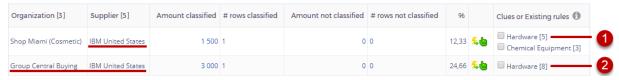
The **weight** of a commodity suggestion reflects the relevance of the suggestion for a spend line. It is computed as the sum of the weights of the criteria to which the suggestion points: the more there are criteria converging to the same suggestion, the more the suggestion is relevant for your spend line and the higher the weight.

Going back to the example where your company purchases hardware from *IBM United States*, let's suppose in addition that the purchase entity in question is the *Group Central Buying* organization. In this case, two clues reflecting this experience would be:

- IBM United States supplier = Hardware commodity, and
- Group Central Buying organization = Hardware commodity.

In the Spend workbench these clues will be materialized like so:

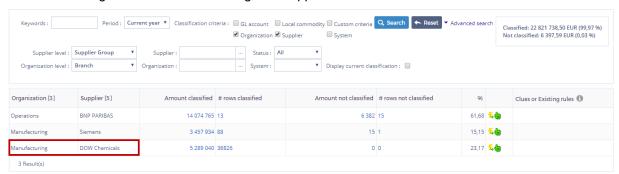
- The *Hardware* suggestion points to the *Supplier* (*IBM United States*) criteria. Hence the weight of the suggestion equals the weight of the *Supplier* criteria (5).
- The *Hardware* suggestion points to both the *Supplier* and *Organization* criteria. The weight of the suggestion is the sum of the weights of these criteria (5+3=8).



## **Creating Classification Rules**

You can create rules from any spend line of the *Spend workbench*: the rule will inherit the spend line values for the selected classification criteria.

If you create a rule from the spend line selected below, the new rule will inherit the Organization=Manufacturing and Supplier=Dow Chemicals criteria.



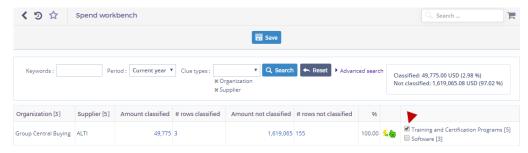
**Note**: Remember that if the supplier used in a rule has child entities, the rule will also cover the child suppliers (for additional information on rules using the *Supplier* criteria, see page 16).

Similarly, if *Group*, *Branch* or *Division* level organization is used in a rule, the rule covers the child organizations (for additional information on rules using the *Organization* criteria, see page 16)

#### **Creating Rules Using Clues**

When a clue meets your needs, you can use it to create a rule. To do so:

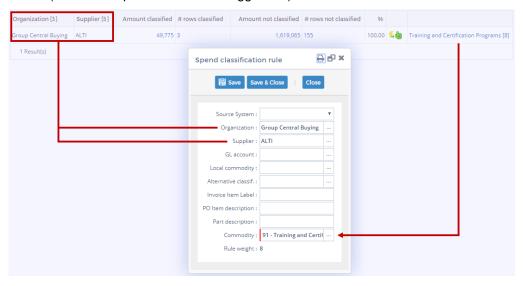
Select the desired clue.
 In the example below, *Training and Certification Programs* is selected.



2. Click the **Save** button available in the action bar.

The selected clue is transformed into a rule represented by a clickable commodity link. To display the new rule, click the link.

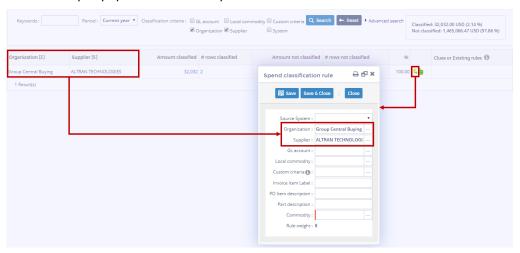
- The new rule takes the spend line values for the selected classification criteria, as well as the commodity of the clue.
- Any other clues previously displayed for the same spend line are now hidden (in our example the Software suggestion).



#### **Creating Rules from Scratch**

If there is no classification clue for a given spend line, or the available clues do not meet your needs, you must create the rule from scratch. To do so:

Click the Create Rule icon soft the spend line you wish to classify.
 The Spend classification rule pop-up window opens. The criteria of the rule being created are pre-populated with the spend line values for the selected criteria.

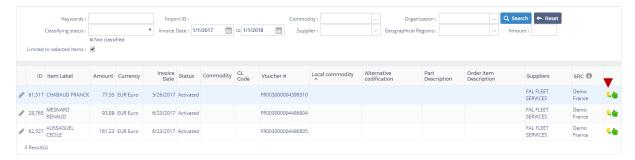


- Fill out any additional criteria you want to include in the rule: the weight of the rule is computed each time you add or remove a criteria.
   The *Invoice Item Label / PO Item Description / Part Description* criteria have a specific behavior; for more information on those criteria, see page 35.
- Select the target Commodity.
- 4. Save and Close the pop-up window.

Your rule is now created and will be considered upon the next run of the EAI task for rule application.

Note that you can also create rules at invoice line level. To do so:

- Access the list of invoice lines either from the Spend workbench page (by clicking the spend line amount or the number of rows), or by selecting the Analytics > Invoice lines menu.
- 2. Click the **Create Rule** icon  $\frac{1}{4}$  of the desired invoice line.



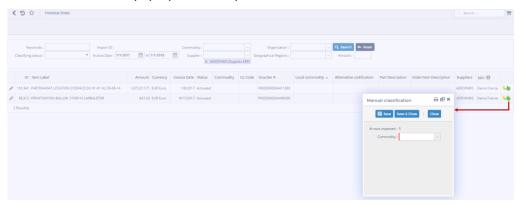
#### **Manually Classifying Invoice Lines**

Manual classification allows to directly assign a commodity to one or more invoice lines without using rules. This is a one-off action that is meant for invoice lines with wrong commodities or for which rules do not work.

You can perform manual classifications either from the list of invoice lines or from the *Spend workbench* page. In either case, the selected classification is applied immediately and doesn't require EAI task to run.

#### From the List of Invoice Lines

- 1. Access the list of invoice lines either from the *Spend Workbench* page (by clicking the amount or the number of invoice lines of the desired spend line), or by selecting the **Analytics** > **Invoice lines** menu.
- 2. Click the **Manual classification** icon of the invoice line you wish to classify. The *Manual classification* pop-up window opens.



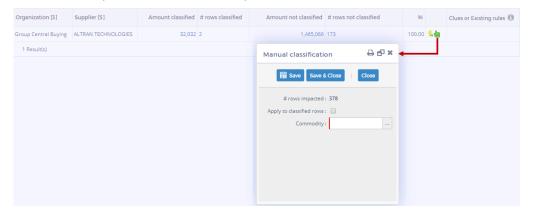
- 3. Select a Commodity.
- 4. Save & Close.

The spend line is classified into the selected commodity.

### From the Spend Workbench Page

1. Click the **Manual classification** icon of the spend line you wish to classify. The *Manual classification* pop-up window opens.

The # rows impacted field refers to all unclassified invoice lines matching the criteria of the current spend line, whatever the period those invoice lines are attached to.



- 2. If you wish to overwrite the classified lines with this manual classification, select the **Apply to classified rows** option.
- 3. Select a Commodity.
- 4. Save & Close.

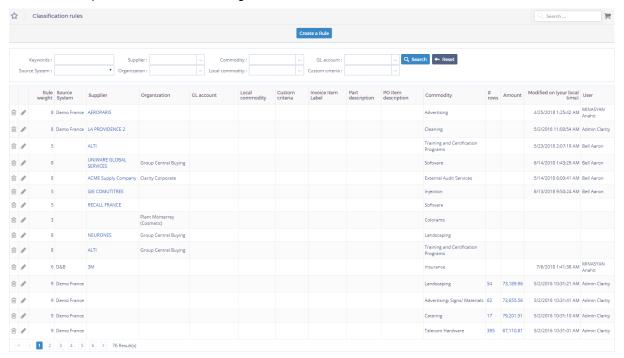
The selected classification is applied.

## **Reviewing the List of Classification Rules**

#### Displaying the Classification Rules Page

Another way of performing spend classification is managing rules from the rule repository, where you can gain a global view on current classification, identify classification inconsistencies, if any, and build a rule repository as complete as possible. The more complete the rule set, the more accurate the resulting classification will be. This also ensures that a growing percentage of the classification process will be automated for subsequent data refresh cycles.

To access the list of rules, select the **Analytics** > **Classification rules** menu. The **Classification rules** page is displayed. Each line of the list represents a rule along with spend data classified using that rule.



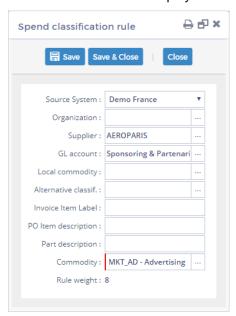
To display rules using a specific commodity, use the **Commodity** filter.

To display rules using a specific classification criteria, use the dedicated criteria filter (the **Supplier**, **Commodity**, **GL account**, and other filters).

#### **Editing the List of Rules**

Based on the results of your analysis, you can edit your rule repository (remember: any update will be considered upon the next run of the EAI task).

- To create a new rule, click the Create a Rule button (for more information on how to create a new rule, see page 24).
- To remove a rule, click its Delete icon
- To modify an existing rule, use the **Edit** icon associated with the desired rule. The current rule is displayed.

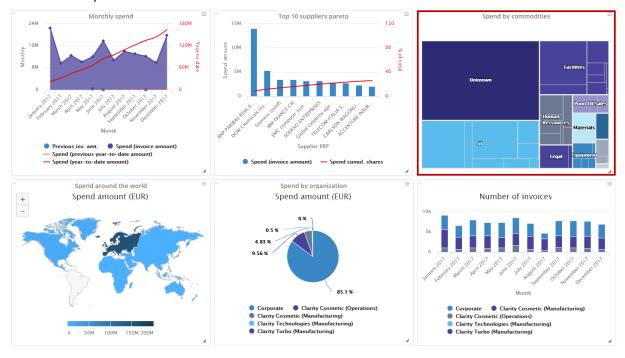


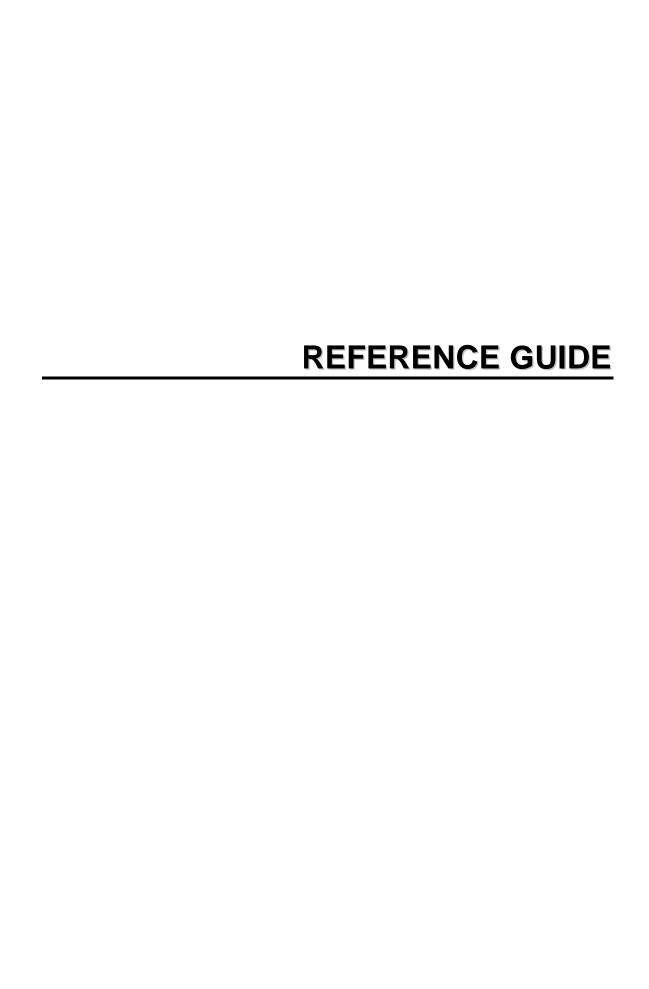
You can modify it in the following ways:

- Change the target Commodity: the invoice lines currently classified using this rule will be reclassified into the new commodity (unless a <u>new</u> rule takes precedence over the current rule due to weightage or seniority advantage).
- ✓ Add, remove or modify the criteria already used in the rule: the rule will apply to invoice lines matching the new criteria. The classification of the invoice lines currently classified using this rule will be reconsidered upon the next run of the EAI task.

## **Visualizing Classified Spend Data**

As a result of the classification process described above, spend reporting is updated with the classified spend data. Here you can manipulate data in order to display the classified spend using various axes, follow up how spend evolves over the years, filter the reports by specific criteria etc.



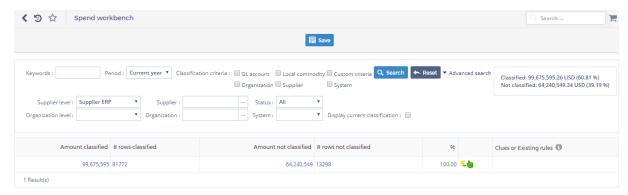


## **Getting Familiar With the Spend Workbench Page**

The *Spend workbench* page helps you to view your spend data and ensure an accurate classification of this data.

To access this page, select the **Analytics** > **Spend Workbench** menu.

The total spend for the current year is displayed by default. To display detailed data or to change the period whose data you wish to view, you must use the filters available in the *Search filter* area.



The **Save** button available in the action bar allows to transform *clues* into *rules* (for information on how to create rules based on clues, see page 23).

#### Search Filter Area

The section in the right corner of the filter area provides real time information on the spend data displayed depending on the search filters applied.

- Classified: invoice lines classified using rules or manually, or (for invoice lines created directly in IVALUA) having a classification before being added to the Spend workbench.
- Not classified: invoice lines without commodity or whose local commodity has not been covered by classification rules.

The table below describes the filters available in the search filter area.

Filter	Description					
Period		Period to which the spend you wish to display is attached: <i>Current year</i> , <i>Previous year</i> or <i>All years</i> (for the overall invoice-line history).				
Classification	(GL account, Lo	(GL account, Local commodity, Organization, Supplier, System, Custom criteria)				
criteria	Selection of invo	Selection of invoice line fields based on which you can consolidate the invoice lines.				
	Select one or me	Select one or more criteria:				
	<ul> <li>For each cri</li> </ul>	<ul> <li>For each criteria selected an additional column is added to the search result</li> </ul>				
	■ The spend is	s consolidate	d based on the	e selected cri	teria	
	Keywords :	Period : Current year		☐ GL account ☐ Local co	ommodity Custom criteria System	Search Reset
	Organization [3]	Supplier [5]	Amount classified	# rows classified	Amount not classified	# rows not classified
		DAID DADIDAS		0	6.382	
	Headquarters (Cosmetic)	BNP PARIBAS	0	U	0,562	15

#### Filter Description

#### Supplier level

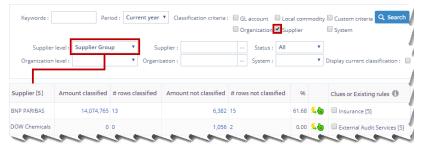
(to be used when the Supplier criteria is selected)

Levels of supplier hierarchy that define the operational structure of the suppliers.

Use this filter to specify by which level you wish to consolidate your spend. For each line of the search result obtained:

- The suppliers are filtered on the selected level
- The spend corresponds to invoice lines linked to the supplier displayed <u>and</u> its child entities, if any.

In the example below the spend is consolidated by the *Supplier* criteria and filtered on the *Supplier Group* level: the spend in the search result relates to the group-level suppliers and their child entities.



For more in information on how to consolidate spend by Supplier Level, see page 11.

#### Organization level

(to be used when the Organization criteria is selected)

Levels of the organizational tree of your company (Group, Branch, Division or Site).

Use the **Organization level** filter to specify by which level you wish to consolidate the overall spend. For each line of the search result obtained:

- The organizations are filtered on the selected level,
- The spend corresponds to invoice lines of the corresponding site-level child organizations.

**Note**: In IVALUA, each invoice line is attached to a site-level organization, which is the lowest level of IVALUA's organizational tree. Each site level organization, and thereby the corresponding invoice lines, is linked to its parent *Division*, *Branch* and *Group* organization.

## Supplier

Suppliers with any level of the supplier hierarchy.

Select a supplier to display the spend attached to that specific supplier and its child entities, if any.

#### Organization

Organizations with any level of the organizational tree.

Select an organization to display the spend attached to that specific organization and its child entities.

#### Status

Classification status of spend lines (All, Classified, Not classified).

## System

Filters the spend depending on the system from which the invoice lines have been imported.

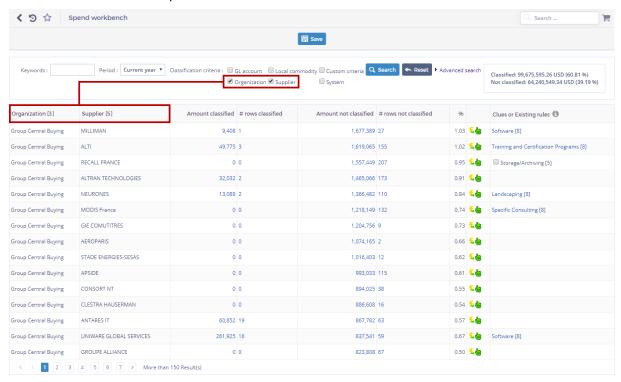
## Display current classification

Displays the classification currently applied to each line of the Spend workbench.

#### Spend Workbench List

This list displays your company spend data. The layout of the *Spend workbench* list depends on the **Classification criteria** that you have selected to consolidate the spend data. For each criteria selected, a new column is added to the spend workbench list. The weight of each criteria is indicated in brackets.

In the screenshot provided below, the *Organization* and *Supplier* classification criteria are selected. Consequently, the *Organization* (weight=3) and *Supplier* (weight=5) columns are added to the spend workbench list.



Each line of the list displays data corresponding to the combination of the spend line values for the criteria selected.

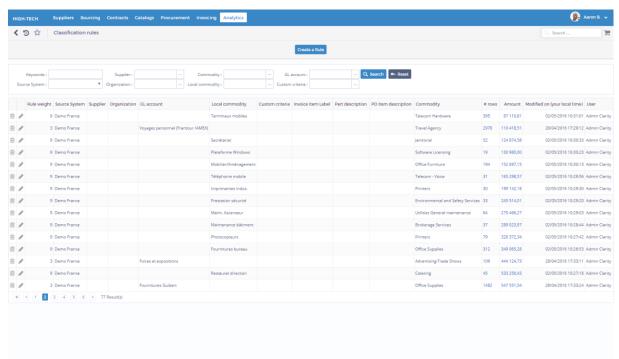
Remember that if you have selected the *Supplier* or *Organization* criteria, the amounts and the numbers of invoice line will include the spend of the related child-suppliers or-child organizations.

Column	Description
Classification criteria (GL Account, Local commodity, Custom criteria, Organization, Supplier or System)	Spend line value for the criteria you have selected in the Classification criteria filter.
Amount classified	Amount of classified spend data. Clicking an amount opens a pop-up window with the list of the associated invoice lines.
# rows classified	Number of classified invoice lines. Clicking a number opens a pop-up window with the lists of the associated invoice lines.
Amount not classified	Amount of unclassified spend data. Clicking an amount opens a pop-up window with the list of the associated invoice lines.
# rows not classified	Number of unclassified invoice lines. Clicking a number opens a pop-up window with the list of the associated invoice lines.
%	Percentage of the classified and unclassified spend amount related to the total amount of spend data displayed in the search result.

Column	Description
₹.	Create Rule icon. Allows to create a new classification rule. For more information on how to create a classification rule from scratch, see page 24).
•	Manual classification icon. Allows to manually assign commodities to invoice lines (for more information on manual classification, see page 25).
Clues or Existing rules	Classification suggestions based on clues or existing rules:
	<ul> <li>Clues are classification suggestions that you can use to create a rule.</li> <li>For more information on clues, see page 17.</li> <li>For information on how to use clues to create rules, see page 23</li> </ul>
	Rule whose criteria match exactly the criteria of the spend line. Note, however, that a rule displayed in this column is not necessarily applied to the spend line: other rules could take precedence because of greater weights or seniority. For additional information on the Clues or Existing rules column, see page 20.
Current classification	Commodities assigned using rules or manually.
	Additional information is displayed next to each commodity:
	The weight of the rule (in brackets) if the commodity was assigned using a rule.  These rule-based commodities are clickable links: clicking the link displays the associated rule in a pop- window.
	The amount of spend data classified into the displayed commodity

## **Classification Rules List**

To access the repository of classification rules, select the **Analytics** > **Classification rules** menu.



The search filter area allows you to display the rules depending on the elements used in the rules:

- Commodity selector: displays the rules using the commodity selected
- Supplier, GL account, Source System, Organization, Local commodity or Custom criteria filters: display the rules using the criteria selected.

The **Create a Rule** button in the action bar allows you to create a new rule.

The list in the search result displays the fields of the rules with the associated spend data.

Column	Description
	Classification criteria
Source System	Source system the spend data originates from
Supplier	Suppliers with any level of supplier hierarchy.
	When a rule uses the <i>Supplier</i> criteria and the supplier selected has child entities, the rule covers also these child suppliers.
	When a child supplier is covered by more than one rule, it's the lowest (more granular) level that prevails.
	For more information on rules using the Supplier criteria, see page 16.
Organization	Organizations with any level of the organizational tree.
	When a rule uses the <i>Organization</i> criteria, that rule covers all child entities of the organization selected in the rule (unless the organization selected is a site-level organization, which in IVALUA is the lowest level of the organizational tree).
	When a child organization is covered by more than one rule, it's the lowest (more granular) level that prevails.
GL account	Your company accounts

Column	Description
Local commodity	Commodity the invoice lines are assigned to in the source system
Custom criteria	Customizable criteria (Cost center, Mercosur code, etc.). This criteria can be renamed and configured either during the initial setup of your application, or later by the Administrator.
Invoice Item Label /	Fields of the imported invoice lines.
Part description / PO Item description	Target invoice lines by filling out the exact content of these fields or using the "%" and "_" wildcard characters:
1 O Item description	The "%" sign replaces zero, one or more characters. Here some examples of how this wildcard can be used:
	■ "abc%": any value that starts with "abc"
	■ "%abc": any value that ends with "abc"
	• "%abc%": any value that contains "abc"
	■ "a%z": any value that starts with "a" and ends with "z"
	The "_" sign represents one single character. You can combine it with the "%" wildcard.
	<ul> <li>"_bc%": any value that starts with any letter followed by "bc" and that ends with any character string</li> </ul>
	"d%": any value that has "d" in the fourth position
Commodity	Commodity of your company taxonomy into which you wish to classify the invoice lines that match the rule
Rule weight	The rule weightage is meant to reflect the relative importance of each rule. It is computed as the sum of the weights of the criteria used in the rule.
	Criteria weights are configured by authorized users.
	Classified spend data
# rows	For each rule, the number of invoice lines classified using that rule.
Amount	For each rule, the amount of spend classified using that rule.

## **Clues Page**

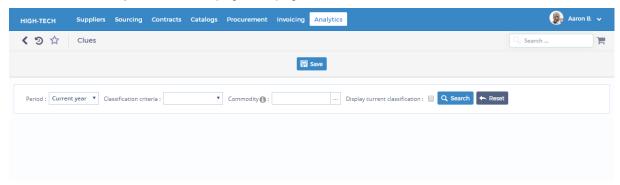
Clues are mappings where commodities from your commodity taxonomy point to (are suggested for) classification criteria. Clues are imported into IVALUA from other systems and stored in the Clues page, the final aim being to display them in the Spend Workbench as classification suggestions when they match the spend line.

To access the *Clues* page, select the **Analytics** > **Clues** menu.

#### Search Filter Area

This area contains the filters you will use to display the desired spend data and associated clues.

When you access the page, the page looks like so:

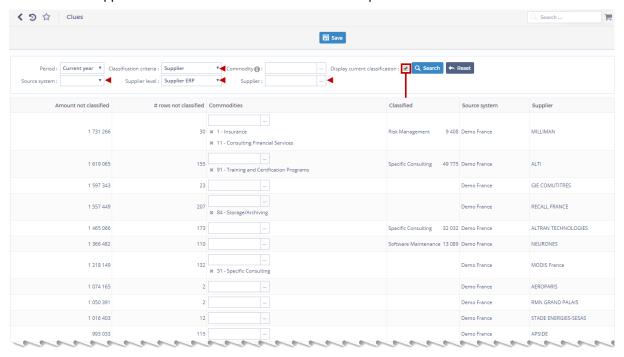


You need to select a **Classification criteria** to display the corresponding data. Upon selecting the desired criteria, additional relevant filters become available and spend data is displayed, broken down by the selected criteria. Commodities are mapped to these criteria.

In the screenshot provided below, the *Supplier Classification criteria* is selected: The *Supplier level*, *Supplier* and *Source system* filters are now available; The commodities mapped to the *Supplier* criteria are displayed.

The **Display current classification** option shows the commodities into which spend lines are classified as well as the associated classified amounts.

The **Commodity** filter allows you to display the criteria to which the selected commodity is mapped as well as the associated unclassified spend.

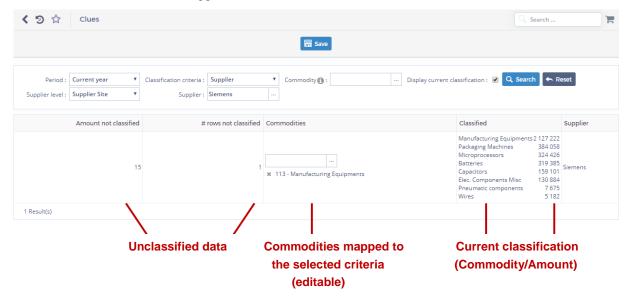


#### **Clues List**

This list presents the spend data broken down by selected criteria and the clues associated with those criteria. For line:

- The Amount not classified and # rows not classified columns display the unclassified spend amounts and invoice lines.
- The Commodities column contains:
  - ✓ A commodity selector, which allows you to create new clues (select a commodity and click Save)
  - ✓ Commodities already mapped to the selected criteria (existing clues)
- The Classified column contains the current classifications (commodities) as well as the classified amounts associated with each commodity. This column is only displayed when the Display classified option is selected in the search filter area.
- The classification criteria column, labeled after the selected criteria. Only one criteria can be selected at a time. If the criteria you have selected can be imported from other systems (such as the GL accounts, ERP suppliers, Local commodities), the Source system column is also displayed.

In the example below, the clue list is filtered on *Siemens / Supplier site*. All spend data have been classified, except one single invoice line (15€). The *Manufacturing Equipment* commodity is mapped to this supplier. In the *Spend workbench*, this commodity will appear as classification suggestion for *Siemens*.



#### Action bar

The action bar contains the **Save** button enabling you to create new clues directly in this page: select a commodity in the commodity selector of the desired spend line and **Save**.

## **Invoice Lines**

This page contains the invoice lines imported from other systems or generated directly in IVALUA. Each row represents one invoice line.

In this page you can view invoice data through different angles: invoice lines classification status, dates, amount and others.

You can also manually classify each invoice line using the *Manual classification* icon  $\frac{1}{2}$  or create rules using the *Create Rule* icon  $\frac{1}{2}$ .

